

# SERVICE MANUAL

## KN15D-2

### 15L BACKPACK SPRAYER

SERVKN15D-2 REV A – 29/08/2025



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# TROUBLESHOOTING GUIDE

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## START HERE

This guide is organised to help you quickly identify troubleshoot and resolve common problems with your sprayer. Use the table of contents below to navigate directly to the section that best matches your concern, whether it involves operation, maintenance, component replacement or troubleshooting.

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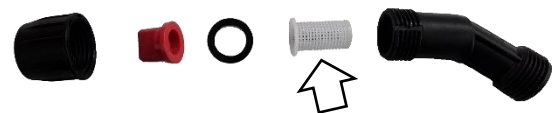
## 1. Spray System

This section focuses on the delivery of liquid through diaphragm pump, hose, spray gun, spray lance and nozzle. Issues such as blocked filters, leaking, trigger malfunctions are diagnosed and resolved here.

### 1.1 Possible blockages

Inspect for possible blockages

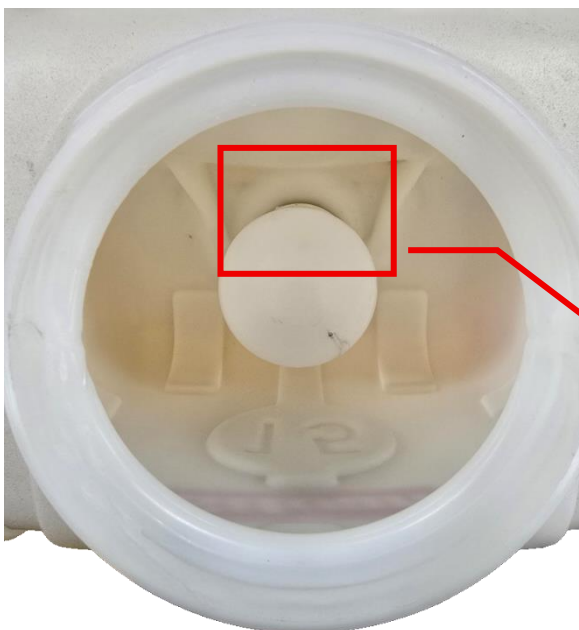
- a. Nozzle tip, disassemble and check for blockages
- b. Nozzle filter, check for cleanliness



- c. Gun filter, ensure the filter is securely screwed to the hose end. If not, check whether the gun filter has dislodged and is jammed in the handle blocking the flow.



- d. Built-in mesh film. Please refer **Section 4.** to safely detach the diaphragm pump to check.

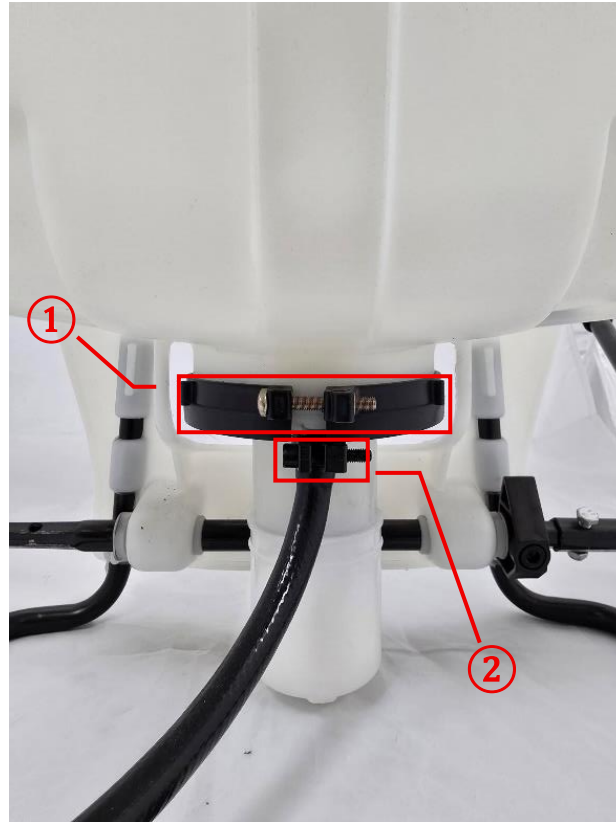


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## 1.2 Pump leaking at tank connection

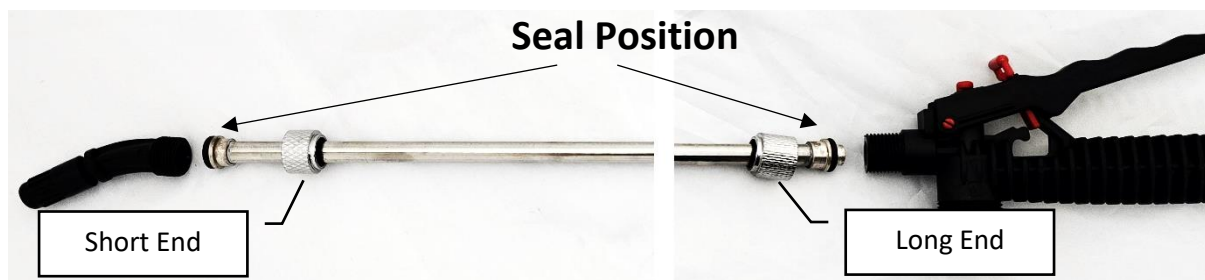
Leaking may be caused by:

- a. **Loose connection clamp:** Tighten the clamp ①, ② securely.



## 1.3 Spray lance leaking

Check O-rings are fitted in correct position



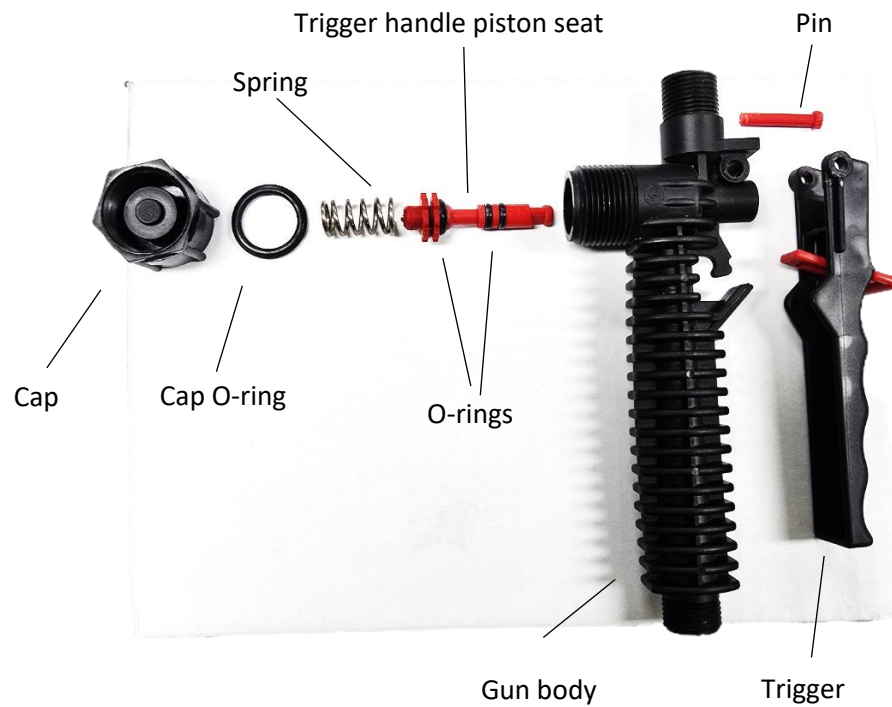
For O-ring replacement, use Silvan spare part kit: **KN15-1-1**.

## 1.4 Spray gun does not shut off

1. Disconnect the spray gun from the spray lance and hose
2. Disassemble the spray gun
  - i. Carefully remove the pin from the gun body and trigger
  - ii. Remove the trigger
  - iii. Unscrew the cap
  - iv. Push the trigger handle piston seat out of the gun body

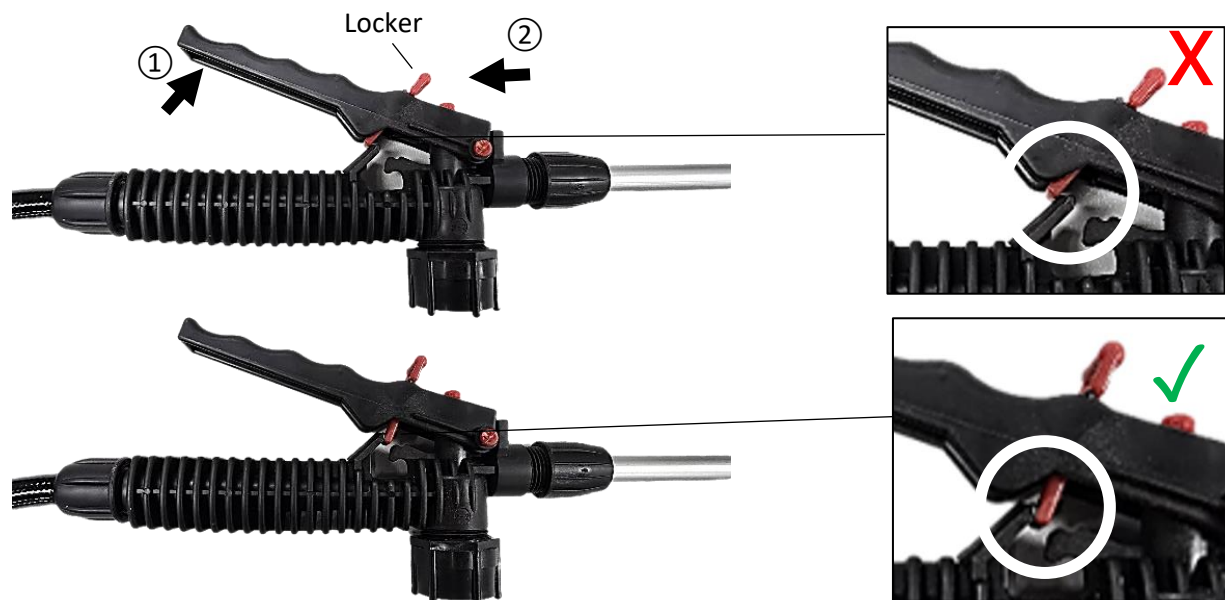
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3. Check O-rings on the trigger handle piston seat for swelling, damage, missing parts or blockages.



## 1.5 Trigger does not lock on

If the locker is offset, gently push the end of the trigger outward ① and realign the locking mechanism inward to its original position ②.



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## 2. Pump system

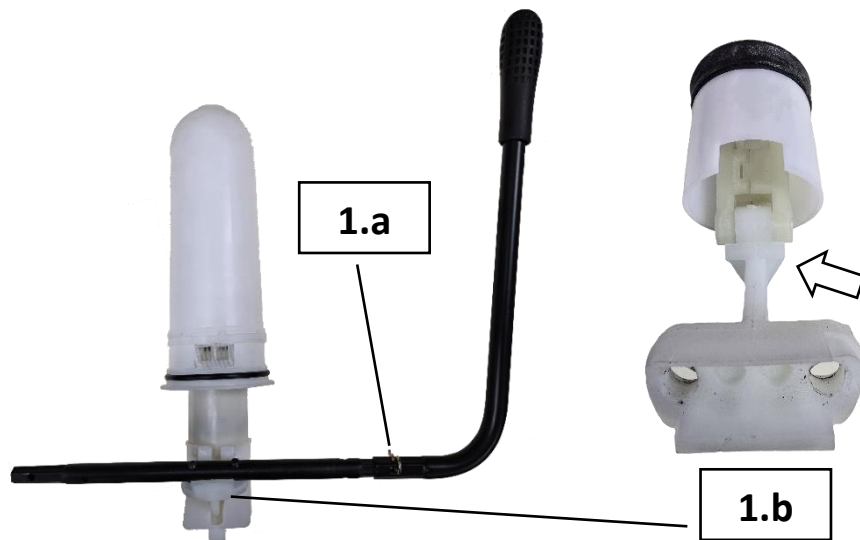
This section addresses cases where the pump fails to operate entirely. If the diaphragm pump does not build pressure when the pump handle is operated, refer to this section to diagnose mechanical, or sealing problems with the pump system.

(Refer to **Section 4.** to safely detach the diaphragm pump.)

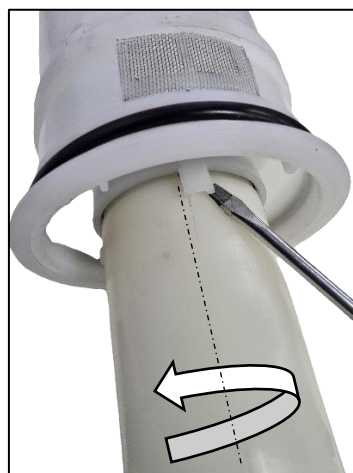
### 1.1 Pump not pumping

#### 1. Mechanical issues

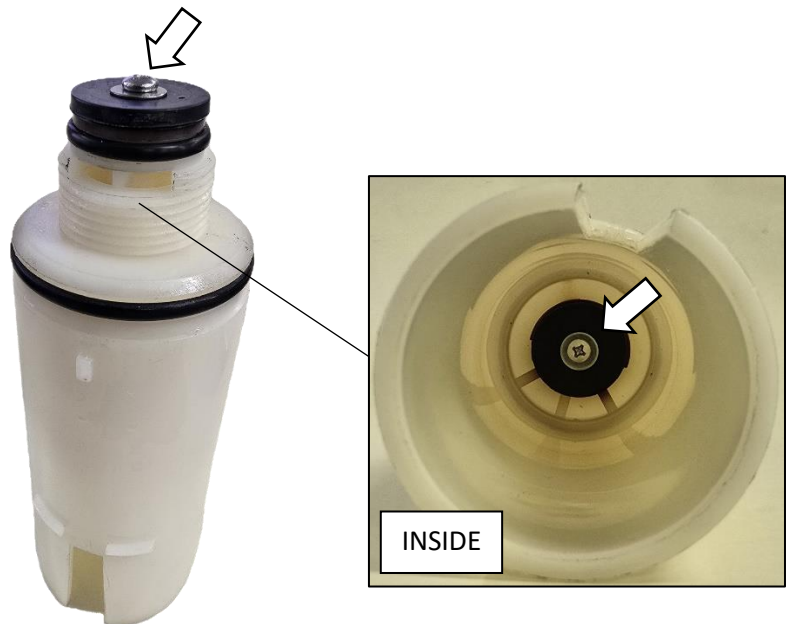
- a. **Check the R-pin:** Ensure the R-pin is properly positioned. It must securely connect the pump handle to the shaft. If the R-pin is missing or out of alignment, the handle will not engage the pump mechanism.
- b. **Inspect the piston hinge:** Pull the piston out of the pump chamber. Check the hinge at base of the piston for any looseness, wear or damage.



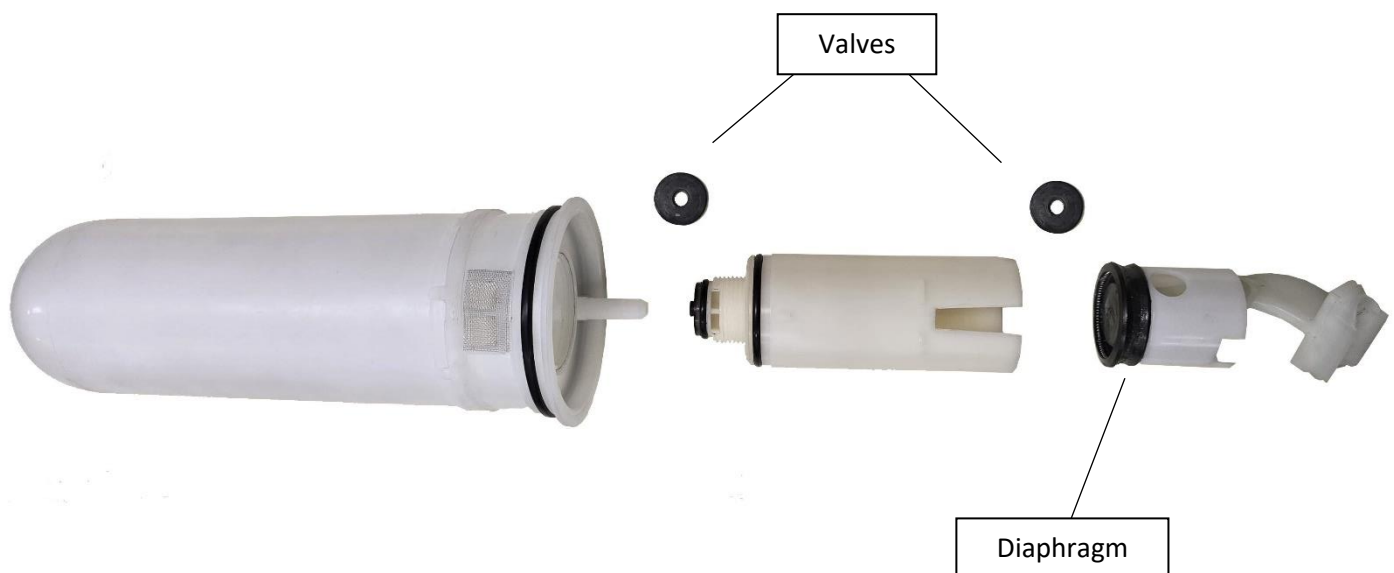
2. Sealing issues, if the pump mechanism is intact but still not building pressure, the issue may lie in the internal sealing. To inspect the pump seals, follow the steps below:
  - a. **Disassemble the piston chamber:** Unscrew the piston chamber from the diaphragm pump. You may need a flathead screwdriver to gently push outward on the groove of the diaphragm housing to help remove the chamber, see image below.



- b. **Rubber valves:** There are two screws securing the internal rubber valves, one is located at the top of the piston chamber, and the other is located inside the chamber. Remove both screws to access the valves.



- c. **Inspect the Diaphragm and valves:** Check all rubber sealing components for signs of wear, damage or cracking.



For Diaphragm replacement, use Silvan spare part kit: **KN15-1-1**.

For Valve replacement, use Silvan spare part: **KN15D-1-4**.



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## 3. Leaks

### 3.1 Lid leaking

If liquid is leaking from the lid area where it connects to the tank body, check the following possible causes:



#### ① Lid gasket

The gasket inside the lid may be damaged, worn or misplaced. Ensure the gasket is position evenly in its groove before threading the lid onto the tank. Replace the lid if the gasket shows signs of cracking, flattening or wear.

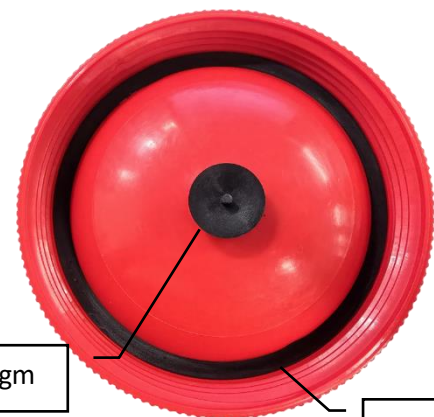
#### ① Tank rim surface defects

Burrs may remain on the top edge of the tank during manufacturing, or the surface may be accidentally damaged during use. When the lid is tightened, the gasket may press against these burrs, creating gaps that allow leakage.

Inspect the tank rim for any rough spots or burrs and carefully remove them.

#### ② Breather Diaphragm

The diaphragm located under the lid may be worn, cracked or missing. Inspect the diaphragm ensure it is intact and seated correctly or not swollen by chemical attack.



Breather Diaphragm

Lid gasket

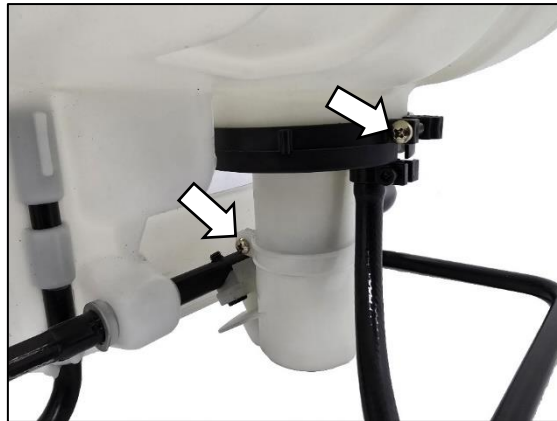
Silvan spare part: Lid, **382-004**



## 4. Removing the Diaphragm pump

For maintenance or inspection, the diaphragm pump may need to be removed. The follow steps below to safely detach the pump without damaging any connected parts.

1. Make sure the sprayer tank, hoses, and spray gun are completely emptied of all liquid.
2. Locate two Philips head screws: one on the connection clamp that secures the diaphragm pump to the tank, and another on the opposite side that holds the hinge cover. Unscrew both screws and remove the clamp and hinge cover.



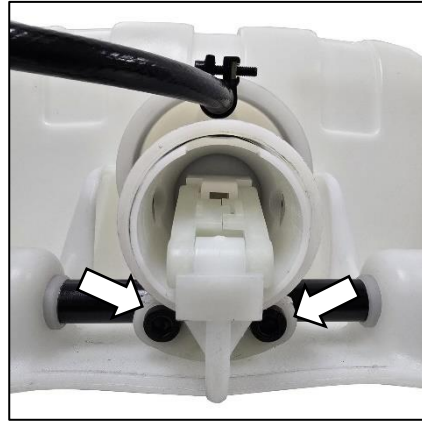
3. Unscrew the socket cap screw on the pump handle stop and remove the stop



4. Pull the pump handle gently toward you to slide the diaphragm pump out of the tank, note that the piston hinge will still be attached to the internal shaft



5. Unscrew the two socket cap screws that connect the piston hinge to the shaft



6. Carefully remove the diaphragm pump from the tank assembly.



# KN15D-2 SPARE PARTS



	Part Number	Description
1	KN15D-1-2	HANDLE SUIT KN15D
2	382-010	GUN ASSY COMPLETE
3	382-004	LID FOR 50L 100L WEEDPAK RAKPAK
4	KN15-1-1	DIAPHRAM REPAIR KIT VITON (INC NOZZLES & O-RINGS)
5	KN15D-1-3	HARNES TO SUIT KN15D
6	KN15D-1-4	RUBBER VALVE SUIT KN15-1 KN15D-1 KN15D-2
7	186-8DM	HOSE 8MM LOW PRESSURE PER METER
8	382-051	TRIGGER HANDLE ONLY